

Practitioner's Docket No. U013541-5

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PATENT TRADEMARK OFFICE

CHAPTER II

**TRANSMITTAL LETTER
TO THE UNITED STATES ELECTED OFFICE (EO/US)**

(ENTRY INTO U.S. NATIONAL PHASE UNDER CHAPTER II)

PCT/RU00/0050 15 FEBRUARY 2000 10 NOVEMBER 1999
INTERNATIONAL APPLICATION NO. INTERNATIONAL FILING DATE PRIORITY DATE CLAIMED
DECADE MULTIPLEXER OF A LOCAL AREA NETWORK
TITLE OF INVENTION
SERGEI VASILLIEVICH ZAKURDAEV
APPLICANT(S)

Box PCT
Assistant Commissioner for Patents
Washington D.C. 20231
ATTENTION: EO/US

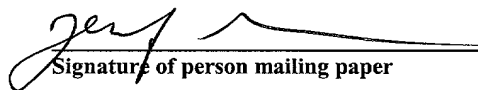
NOTE: The completion of those filing requirements that can be made at a time later than 30 months from the priority date results from the Commissioner exercising his judgment under the authority granted under 35 USC 371(d). The filing receipt will show the actual date of receipt of the last item completing the entry into the national phase. See 37 C.F.R. §1.491 which states: "An international application enters the national state when the applicant has filed the documents and fees required by 35 USC 371(c) within the periods set forth in § 1.494 and § 1.495."

CERTIFICATION UNDER 37 C.F.R. 1.10*
(Express Mail label number is **mandatory**.)
(Express Mail certification is optional.)

I hereby certify that this correspondence and the documents referred to as attached therein are being deposited with the United States Postal Service on this date July 10, 2001, in an envelope as "Express Mail Post Office to Addressee," Mailing Label Number EL728213866US, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

JENNIFER RASHKIN

(type or print name of person mailing paper)


Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

***WARNING:** Each paper or fee filed by "Express Mail" **must** have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. 1.10(b).
"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

(Transmittal Letter to the United States Elected Office (EO/US)—page 1 of 8) **13-18**

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WARNING: *Where the items are those which can be submitted to complete the entry of the international application into the national phase are subsequent to 30 months from the priority date the application is still considered to be in the international state and if mailing procedures are utilized to obtain a date the express mail procedure of 37 C.F.R. §1.10 must be used (since international application papers are not covered by an ordinary certificate of mailing - See 37 C.F.R. §1.8.*

NOTE: *Documents and fees must be clearly identified as a submission to enter the national state under 35 USC 371 otherwise the submission will be considered as being made under 35 USC 111. 37 C.F.R. § 1.494(f).*

1. Applicant herewith submits to the United States Elected Office (EO/US) the following items under 35 U.S.C. 371:
 - a. ☒ This express request to immediately begin national examination procedures (35 U.S.C. 371(f)).
 - b. ☒ The U.S. National Fee (35 U.S.C. 371(c)(1)) and other fees (37 C.F.R. § 1.492) as indicated below:

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2.Fees

CLAIMS FEE	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
[x]*	TOTAL CLAIMS	1 - 20 =		x \$ 18.00 =	\$
	INDEPENDENT CLAIMS	1 - 3 =		x \$ 80.00 =	
	MULTIPLE DEPENDENT CLAIM(S) (if applicable) + \$270.00				
BASIC FEE**	<p>[] U.S. PTO WAS INTERNATIONAL PRELIMINARY EXAMINATION AUTHORITY Where an International preliminary examination fee as set forth in § 1.482 has been paid on the international application to the U.S. PTO: [] and the international preliminary examination report states that the criteria of novelty, inventive step (non-obviousness) and industrial activity, as defined in PCT Article 33(2) to (4) have been satisfied for all the claims presented in the application entering the national stage (37 CFR 1.492(a)(4)) \$100.00 [] and the above requirements are not met (37 CFR 1.492(a)(1)) \$690.00</p> <p>[x] U.S. PTO WAS NOT INTERNATIONAL PRELIMINARY EXAMINATION AUTHORITY Where no international preliminary examination fee as set forth in § 1.482 has been paid to the U.S. PTO, and payment of an international search fee as set forth in § 1.445(a)(2) to the U.S. PTO: [] has been paid (37 CFR 1.492(a)(2)) \$710.00 [x] has not been paid (37 CFR 1.492(a)(3)) \$1,000.00 [] where a search report on the international application has been prepared by the European Patent Office or the Japanese Patent Office (37 CFR 1.492(a)(5)) \$860.00</p>				
	Total of above Calculations				
	1000.00				
SMALL ENTITY	Reduction by ½ for filing by small entity, if applicable. Statement may also be filed. (note 37 CFR 1.9, 1.27, 1.28)				
	-500.00				
	Subtotal				
	500.00				
	Total National Fee				
	\$ 500.00				
	Fee for recording the enclosed assignment document \$40.00 (37 CFR 1.21(h)). (See Item 13 below). See attached "ASSIGNMENT COVER SHEET".				
TOTAL	Total Fees enclosed				
	\$500.00				

*See attached Preliminary Amendment Reducing the Number of Claims.

- i. ☒ A check in the amount of \$500.00 to cover the above fees is enclosed.
 ii. ☐ Please charge Account No. _____ in the amount of \$ _____.
 A duplicate copy of this sheet is enclosed.

****WARNING:** "To avoid abandonment of the application the applicant shall furnish to the United States Patent and Trademark Office not later than the expiration of 30 months from the priority date: * * * (2) the basic national fee (see § 1.492(a)). The 30-month time limit may not be extended." 37 C.F.R. § 1.495(b).

WARNING: If the translation of the international application and/or the oath or declaration have not been submitted by the applicant within thirty (30) months from the priority date, such requirements may be met within a time period set by the Office. 37 C.F.R. § 1.495(b)(2). The payment of the surcharge set forth in § 1.492(e) is required as a condition for accepting the oath or declaration later than thirty (30) months after the priority date. The payment of the processing fee set forth in § 1.492(f) is required for acceptance of an English translation later than thirty (30) months after the priority date. Failure to comply with these requirements will result in abandonment of the application. The provisions of § 1.136 apply to the period which is set. Notice of Jan. 3, 1993, 1147 O.G. 29 to 40.

3. ☒ A copy of the International application as filed (35 U.S.C. 371(c)(2)):

NOTE: Section 1.495 (b) was amended to require that the basic national fee and a copy of the international application must be filed with the Office by 30 months from the priority date to avoid abandonment "The International Bureau normally provides the copy of the international application to the Office in accordance with PCT Article 20. At the same time, the International Bureau notifies applicant of the communication to the Office. In accordance with PCT Rule 47.1, that notice shall be accepted by all designated offices as conclusive evidence that the communication has duly taken place. Thus, if the applicant desires to enter the national stage, the applicant normally need only check to be sure the notice from the International Bureau has been received and then pay the basic national fee by 30 months from the priority date." Notice of Jan. 7, 1993, 1147 O.G. 29 to 40, at 35-36. See item 14c below.

- a. ☒ is transmitted herewith.
 b. ☐ is not required, as the application was filed with the United States Receiving Office.
 c. ☒ has been transmitted
 i. ☒ by the International Bureau.
 Date of mailing of the application (from form PCT/IB/308): _____.
 ii. ☐ by applicant on _____.
 Date

4. ☒ A translation of the International application into the English language (35 U.S.C. 371(c)(2)):
 a. ☒ is transmitted herewith.
 b. ☐ is not required as the application was filed in English.
 c. ☐ was previously transmitted by applicant on _____.
 Date
 d. ☐ will follow.

5. ☒ Amendments to the claims of the International application under PCT Article 19 (35 U.S.C. 371(c)(3)):

NOTE: The Notice of January 7, 1993 points out that 37 C.F.R. § 1.495(a) was amended to clarify the existing and continuing practice that PCT Article 19 amendments must be submitted by 30 months from the priority date and this deadline may not be extended. The Notice further advises that: "The failure to do so will not result in loss of the subject matter of the PCT Article 19 amendments. Applicant may submit that subject matter in a preliminary amendment filed under section 1.121. In many cases, filing an amendment under section 1.121 is preferable since grammatical or idiomatic errors may be corrected." 1147 O.G. 29-40, at 36.

- a. ☐ are transmitted herewith.
b. ☐ have been transmitted
i. ☐ by the International Bureau.
Date of mailing of the amendment (from form PCT/IB/308): _____.
ii. ☐ by applicant on _____.
Date
c. ☒ have not been transmitted as
i. ☒ applicant chose not to make amendments under PCT Article 19.
Date of mailing of Search Report (from form PCT/ISA/210): 6 JULY 2000.
ii. ☐ the time limit for the submission of amendments has not yet expired.
The amendments or a statement that amendments have not been made will be transmitted before the expiration of the time limit under PCT Rule 46.1.
6. ☒ A translation of the amendments to the claims under PCT Article 19 (38 U.S.C. 371(c)(3)):
a. ☐ is transmitted herewith.
b. ☐ is not required as the amendments were made in the English language.
c. ☒ has not been transmitted for reasons indicated at point 5(c) above.
7. ☐ A copy of the international examination report (PCT/IPEA/409)
☐ is transmitted herewith.
☐ is not required as the application was filed with the United States Receiving Office.
8. ☐ Annex(es) to the international preliminary examination report
a. ☐ is/are transmitted herewith.
b. ☐ is/are not required as the application was filed with the United States Receiving Office.
9. ☐ A translation of the annexes to the international preliminary examination report
a. ☐ is transmitted herewith.
b. ☐ is not required as the annexes are in the English language.

10. ☒ An oath or declaration of the inventor (35 U.S.C. 371(c)(4)) complying with 35 U.S.C. 115
- a. ☐ was previously submitted by applicant on _____.
Date
- b. ☒ is submitted herewith, and such oath or declaration
- i. ☒ is attached to the application.
- ii. ☐ identifies the application and any amendments under PCT Article 19 that were transmitted as stated in points 3(b) or 3(c) and 5(b); and states that they were reviewed by the inventor as required by 37 C.F.R. 1.70.
- c. ☐ will follow.

Other document(s) or information included:

11. ☒ An International Search Report (PCT/ISA/210) or Declaration under PCT Article 17(2)(a):
- a. ☒ is transmitted herewith.
- b. ☐ has been transmitted by the International Bureau.
Date of mailing (from form PCT/IB/308): _____.
- c. ☐ is not required, as the application was searched by the United States International Searching Authority.
- d. ☐ will be transmitted promptly upon request.
- e. ☐ has been submitted by applicant on _____.
Date

12. ☒ An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98:
- a. ☐ is transmitted herewith.
Also transmitted herewith is/are:
☐ Form PTO-1449 (PTO/SB/08A and 08B).
☐ Copies of citations listed.
- b. ☒ will be transmitted within THREE MONTHS of the date of submission of requirements under 35 U.S.C. 371(c).
- c. ☐ was previously submitted by applicant on _____.
Date

13. ☐ An assignment document is transmitted herewith for recording.

A separate ☐ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.

14. ☒ Additional documents:
- a. ☒ Copy of request (PCT/RO/101)
- b. ☒ International Publication No. WO 01/35583
- i. ☐ Specification, claims and drawing
- ii. ☒ Front page only
- c. ☐ Preliminary amendment (37 C.F.R. § 1.121)
- d. ☒ Other

FORM PCT/IB/304

15. ☒ The above checked items are being transmitted
- a. ☐ before 30 months from any claimed priority date.
- b. ☒ after 30 months.
16. ☐ Certain requirements under 35 U.S.C. 371 were previously submitted by the applicant on _____, namely:
- _____
- _____
- _____

AUTHORIZATION TO CHARGE ADDITIONAL FEES

WARNING: *Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges if extra claims are authorized.*

NOTE: *"A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).*

NOTE: *"Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. § 1.26(a).*

☒ The Commissioner is hereby authorized to charge the following additional fees that may be required by this paper and during the entire pendency of this application to Account No. 12-0425.

☒ 37 C.F.R. 1.492(a)(1), (2), (3), and (4) (filing fees)

WARNING: *Because failure to pay the national fee within 30 months without extension (37 C.F.R. § 1.495(b)(2)) results in abandonment of the application, it would be best to always check the above box.*

☐ 37 C.F.R. 1.492(b), (c) and (d) (presentation of extra claims)

NOTE: *Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must*

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only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 C.F.R. § 1.492(d)), it might be best not to authorize the PTO to charge additional claim fees, except possible when dealing with amendments after final action.

- ☒ 37 C.F.R. 1.17 (application processing fees)
- ☒ 37 C.F.R. 1.17(a)(1)-(5)(extension fees pursuant to § 1.136(a).
- ☒ 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))

NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. § 1.311(b).

NOTE: 37 C.F.R. 1.28(b) requires "Notification of any change in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying . . . issue fee." From the wording of 37 C.F.R. § 1.28(b): (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

- ☐ 37 C.F.R. § 1.492(e) and (f) (surcharge fees for filing the declaration and/or filing an English translation of an International Application later than 30 months after the priority date).



SIGNATURE OF PRACTITIONER

Reg. No.: 25,858

WILLIAM R. EVANS

(type or print name of practitioner)

Tel. No.: (212) 708-1930

P.O. Address

Customer No.: 00140

c/o Ladas & Parry
26 West 61st Street
New York, N.Y. 10023

Practitioner's Docket No. _____

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

☒ In re application of: Zakurdaev S.V.

Application No.:

Group No.:

Filed:

Examiner:

For: Decade Multiplexer of a Local Area Network

☐ *Patent No.:

Issue Date:

**NOTE: Insert name(s) of inventor(s) and title also for patent Where statement is with respect to a maintenance fee payment, also insert application number and filing date, and add Box M. Fee to address.*

STATEMENT CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(c-f) and 1.27(b-d))

With respect to the invention described in

☒ the specification filed herewith.

☐ application no. _____, filed _____.

☐ patent no. _____ issued _____.

I. IDENTIFICATION AND RIGHTS AS A SMALL ENTITY

I hereby state that I am

(complete either (a), (b), (c) or (d) below)

(a) Independent Inventor

☒ a below named independent inventor, and that I qualify as an independent inventor, as defined in 37 CFR 1.9(c), for purposes of paying reduced fees under Sections 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office.

(b) Noninventor Supporting a Claim by Another

☐ making this statement to support a claim by

for a small entity status for purposes of paying reduced fees under Sections 41(a) and (b) of Title 35, United States Code. I hereby state that I would qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under Sections 41(a) and (b) of Title 35, United States Code, if I had made the above identified invention.

(c) Small Business Concern

☐ the owner of the small business concern identified below:

☐ an official of the small business concern empowered to act on behalf of the concern identified below:

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Name of Concern _____
Address of Concern _____

_____ and
that the above identified small business concern qualifies as a small business concern, as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under Sections 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

(d) Non-Profit Organization

☐ an official empowered to act on behalf of the nonprofit organization identified below:

Name of Organization _____
Address of Organization _____

TYPE OF ORGANIZATION

- ☐ University or Other Institution of Higher Education
☐ Tax Exempt Under Internal Revenue Service Code (26 USC 501(a) and 501(c) (3))
☐ Nonprofit Scientific or Educational Under Statute of State of the United States of America
(Name of State _____)
(Citation of Statute _____)
☐ Would Qualify as Tax Exempt Under Internal Revenue Service Code (26 USC 501(a) and 501(c) (3)), if Located in the United States of America
☐ Would Qualify as Nonprofit Scientific or Educational Under Statute of State of the United States of America, if Located in the United States of America
(Name of State _____)
(Citation of Statute _____)

and that the nonprofit organization identified above qualifies as a nonprofit organization, as defined in 37 CFR 1.9(e), for purposes of paying reduced fees under Sections 41(a) and (b) of Title 35, United States Code.

II. OWNERSHIP OF INVENTION BY DECLARANT

I hereby state that rights under contract or law remain with and/or have been conveyed to the above identified

☐ person
(item (a) or (b) above)

☐ concern
(item (c) above)

☐ organization
(item (d) above)

V. SIGNATURES

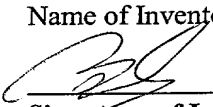
(complete only (e) or (f) below)

(e)

NOTE: All inventors must sign the statement.

Sergei Vasilievich ZAKURDAEV

Name of Inventor


Signature of Inventor

Date: July 04, 2001

Name of Inventor

Signature of Inventor

Date: _____

Name of Inventor

Signature of Inventor

Date: _____

(add lines for any additional inventors who must sign)

or

(f)

NOTE: The title of the person signing on behalf of a concern or nonprofit organization should be specified.

Name of Person Signing _____

Title of Person _____
(if signing on behalf of a concern or non-profit organization)

Address of Person Signing _____

SIGNATURE _____

DATE _____

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DECADE MULTIPLEXER OF A LOCAL AREA NETWORK

Field of the invention

5 The invention relates to the field of communication, in particular, to the building of data communication networks for transmission of information and to computer networks.

Background of the invention

10 Local area networks and methods for connecting segments (or separate stations) thereof are known allowing switching the users in a local area network to provide the mode "everyone with everyone" (see GB 2283886A, cl. H04L 12/40, published May 17, 1995, GB 2273855A, cl. H04L 12/40,
15 published Jun. 29, 1994., US 5469439A, cl. H04L 12/40, published Nov. 21, 1995, WO 98/41053A1, cl. H04Q 11/06, published Sep. 17, 1998).

20 The existing local area networks have a commonly shared transmitting medium, and in order to increase the pass band per one station the local area network is segmented on segments (or separate stations) and they are joined with use of multiplexers.

25 It is known a joining circuit comprising a data processing unit, an address allocation node, a central processing unit, a media unit, a memory and group subprocessors (see US 5237566A, cl. H04L 12/44, published Aug. 17, 1993), being the closest technical decision to the claimed one.

30 This circuit (i.e. possibility to connect "everyone with everyone") does not provide:

- 1) sufficient level of safety and confidentiality;
- 2) reliability of transmission due to the likelihood of overflow of the multiplexers buffers because of uncontrolled communication of the "client - client" type.

Disclosure of the invention

Taking into account that "client - server" mode is the main operation mode of the computer networks and a special protective server (firewall) is used for communication between the clients (user's stations), the scheme server-multiplexer-clients (user's stations) provides more optimal layout of the user's network.

Scalability of the Ethernet protocols providing transmitting speed 1/10/100/1000 Mbps allows to use a common structurally-functional (electric) circuit of the decade multiplexer, allowing to build up local area networks of different size (10, 100 and even 1000 users) with guaranteed transmitting speed (10 Mbps for stationary users and 1 Mbps for mobile users).

Communication in such networks is provided only through the server being a powerful computer, providing connection, checking the authority and synchronizing work of the users (clients).

The invention provides a possibility of creation a wireless network of different size with guaranteed link speed 1 Mbps.

This task is solved by that the decade multiplexer contains the a data processing unit connected to an address allocation module of the multiplexing and demultiplexing bus, a control bus. It also contains eleven transmitting-receiving units, a central transmitting-receiving unit, an additional filtration module, an additional access module and an AND gate. Each transmitting-receiving unit contains connected in-series: a reception interface, a reception buffer (memory) and an access module, which output is connected to the multiplexing bus, and also connected in-series: a filtration module, a transmitting buffer and a transmitting interface connected to an input of the

reception interface and being an input/output of the transmitting-receiving unit. The filtration module control input of each transmitting-receiving unit is connected to the control bus connected to the data processing module control output, this control bus provides control over input of the additional filtration module. The additional filtration module input is connected to the demultiplexing bus, and its output is connected to the input of the data processing module. The output of the latter, through the additional access module, is connected to the multiplexing bus. The input of the filtration module of each transmitting-receiving unit is connected to the demultiplexing bus. The "activity" outputs of the ten transmitting-receiving units reception interfaces are connected through an AND gate to the "blocking" input of the reception interface of the eleventh transmitting-receiving unit. The central transmitting-receiving unit contains connected in-series: a filtration unit, which input is connected to the multiplexing bus, a transmitting buffer and a transmitting interface, and also connected in-series: a reception interface, which input is connected to the transmitting interface output and being an input/output of the central transmitting-receiving unit, a reception buffer and an access unit which output is connected to the demultiplexing bus. The output of the central transmitting-receiving unit reception interface is connected to an input of the address allocation module.

Brief description of the drawings

Fig. 1 shows a structural electric circuit of the Ethernet decade multiplexer.

The Ethernet decade multiplexer contains eleven transmitting-receiving units 1-11 providing reception-transmitting of Ethernet information frames with speed "C" Mbps. (C = 1, 10, 100 Mbps) and central transmitting-receiving unit 12 providing reception-transmitting of Ethernet frames with speed 10 C Mbps.

Central transmitting-receiving unit 12 contains reception interface 19, reception buffer 20, access unit 21, transmitting interface 22, transmitting buffer 23 and filtration unit 24. Thus, reception interface 19 output is connected to address allocation module 25 of the received Ethernet frame, connected to data processing module 26 which is connected by control bus 27 to control inputs of filtration modules 18 of transmitting-receiving units 1-11.

Thus, the data processing module 26 is connected by demultiplexing bus 28 and multiplexing bus 29 through corresponding additional filtration module 30 and additional access module 31, and the "activity" outputs of reception interfaces 13 of transmitting-receiving units 1-10 are connected through AND gate 32 to the "blocking" input of the reception interface of the eleventh transmitting-receiving unit 11.

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1. A stationary network

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2. A wireless network

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for allocation of a free channel/server. In case a free channel (F1 - F10) is available, the server sends an answer with a number of a free channel, that results in digital retuning of the channel.

5 At work of all ten channels the reception interface 13 of the eleventh transmitting-receiving units 11 is blocked until one of the channels will not be released.

10 Presence of a family of multiplexers 1/10, 10/100 and 100/100 allows, with use of cascading, to build up wireless networks of different size with guaranteed link speed 1 Mbps for 10, 100 and 1000 active users on the basis of a server with a network card GigaEthernet (1000 Mbps).

Industrial applicability

15 The local area network, decade multiplexer relates to the field of communication, in particular, to the build up of communication networks for transmitting of information and to the computer networks.

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Claims

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A decade multiplexer comprising a data processing unit, connected to an address allocation module, and also multiplexing and demultiplexing buses, and also a control bus, characterized in that eleven transmitting-receiving units are introduced into the multiplexer, a central transmitting-receiving unit, an additional filtration module, an additional access module and an AND gate, thus each transmitting-receiving unit contains connected in-series a reception interface, a reception buffer and an access module, which output is connected to the multiplexing bus, and also connected in-series a filtration module, a transmitting buffer and a transmitting interface, which is connected to the input of the reception interface, and being an input/output of the transmitting-receiving unit, and a control input of the filtration module of each transmitting-receiving unit is connected to the control bus connected to the control output of the data processing module and a control input of the additional filtration module, which input is connected to the demultiplexing bus, and output is connected to input of the data processing module, which output through the additional access module is connected to the multiplexing bus, and input of the filtration module of each transmitting-receiving unit is connected to the demultiplexing bus, the outputs "activity" of reception interfaces of the ten transmitting-receiving units are connected through an AND gate to the "blocking" input of the reception interface of the eleventh transmitting-receiving unit, and the central transmitting-receiving unit contains connected in-series a filtrations unit, which input is connected to the multiplexing bus, a transmitting buffer and a transmitting interface, and also connected in-series a reception interface, which input is connected to output of the transmitting interface, and

being an input/output of the central transmitting-receiving unit, a reception buffer and an access unit, which output is connected to the demultiplexing bus, the output of the reception interface of the central transmitting-receiving
5 unit is connected to the input of the address allocation module.

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ABSTRACT

5 The invention refers to communications area in particular to a build up of local network
for transmission of information. A technical results resides in a possibility to create of a wireless
network of different shapes with a guaranteed speed transmission of 1 Mbit/s. It is achieved by a
cascading and by building up a scheme of a multiplexer using two-way units (1 - 11) having
different working speeds. Here the central two-way unit (12) has the working speed 10 times
10 higher then other eleven two-way units.

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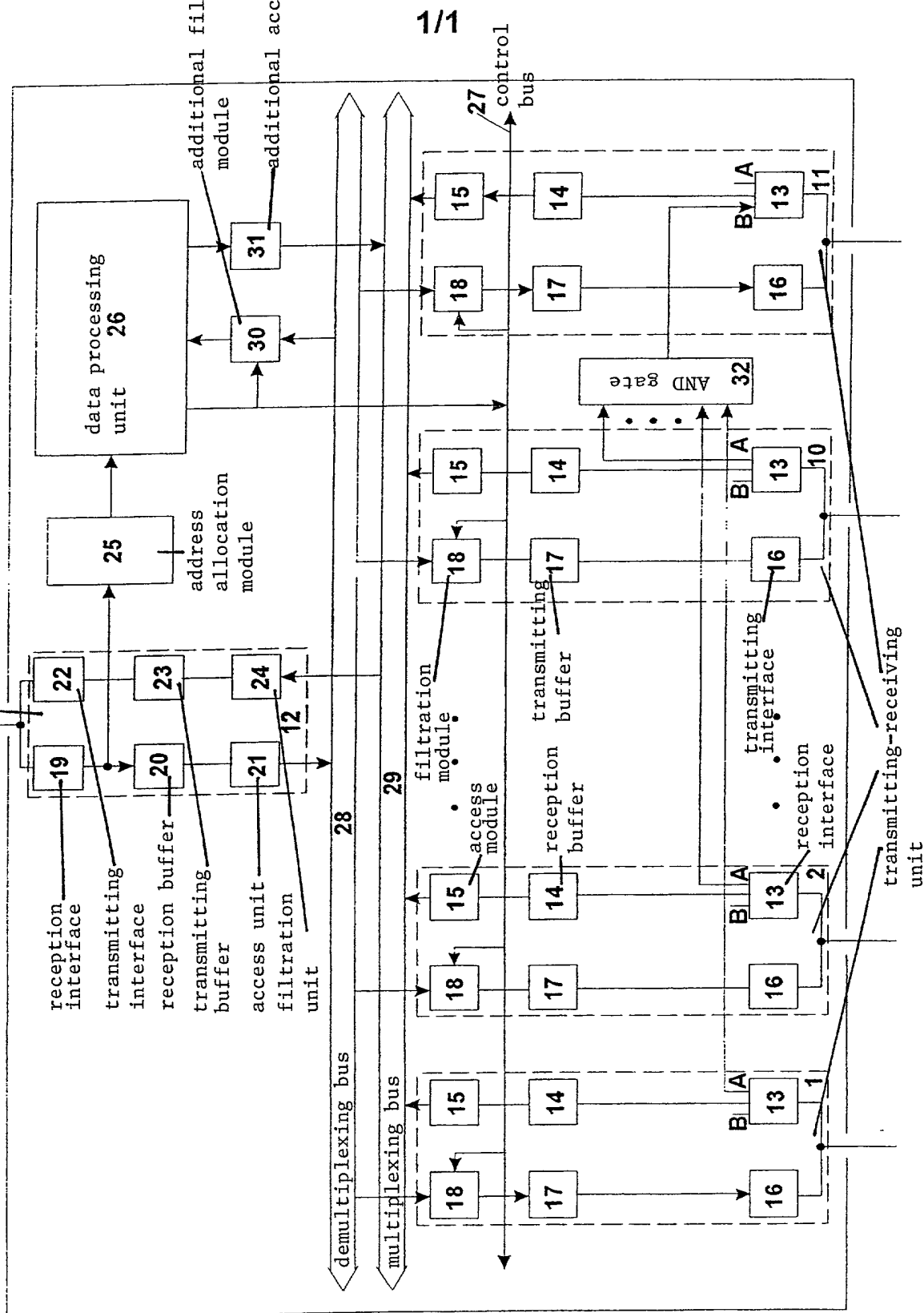


Fig.1

COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL,
CONTINUATION, OR C-I-P)

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

This declaration is of the following type:

(check one applicable item below)

☐ original.

☐ design.

NOTE: *With the exception of a supplemental oath or declaration submitted in a reissue, a supplemental oath or declaration is not treated as an amendment under 37 CFR 1.312 (Amendments after allowance). M.P.E.P. Section 714.16, 7th Ed.*

☐ supplemental.

NOTE: *If the declaration is for an International Application being filed as a divisional, continuation or continuation-in-part application, do not check next item; check appropriate one of last three items.*

☒ national stage of PCT.

NOTE: *If one of the following 3 items apply, then complete and also attach ADDED PAGES FOR DIVISIONAL, CONTINUATION OR C-I-P.*

NOTE: *See 37 C.F.R. Section 1.63(d) (continued prosecution application) for use of a prior nonprovisional application declaration in the continuation or divisional application being filed on behalf of the same or fewer of the inventors named in the prior application.*

☐ divisional.

☐ continuation.

NOTE: *Where an application discloses and claims subject matter not disclosed in the prior application, or a continuation or divisional application names an inventor not named in the prior application, a continuation-in-part application must be filed under 37 C.F.R. Section 1.53(b) (application filing requirements-nonprovisional application).*

☐ continuation-in-part (C-I-P).

INVENTORSHIP IDENTIFICATION

WARNING: *If the inventors are each not the inventors of all the claims, an explanation of the facts, including the ownership of all the claims at the time the last claimed invention was made, should be submitted.*

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am the original, first and sole inventor (*if only one name is listed below*) or an original, first and joint inventor (*if plural names are listed below*) of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

Decade Multiplexer of a Local Area Network

SPECIFICATION IDENTIFICATION

The specification of which:

(complete (a), (b), or (c))

(a) ☒ is attached hereto.

NOTE: "The following combinations of information supplied in an oath or declaration filed on the application filing date with a specification are acceptable as minimums for identifying a specification and compliance with any one of the items below will be accepted as complying with the identification requirement of 37 C.F.R. Section 1.63:

"(1) name of inventor(s), and reference to an attached specification which is both attached to the oath or declaration at the time of execution and submitted with the oath or declaration on filing;

"(2) name of inventor(s), and attorney docket number which was on the specification as filed; or

"(3) name of inventor(s), and title which was on the specification as filed."

Notice of July 13, 1995 (1177 O.G. 60).

(b) ☐ was filed on _____, ☐ as Application No. _____
☐ and was amended on _____ (if applicable).

NOTE: Amendments filed after the original papers are deposited with the PTO that contain new matter are not accorded a filing date by being referred to in the declaration. Accordingly, the amendments involved are those filed with the application papers or, in the case of a supplemental declaration, are those amendments claiming matter not encompassed in the original statement of invention or claims. See 37 C.F.R. Section 1.67.

NOTE: "The following combinations of information supplied in an oath or declaration filed after the filing date are acceptable as minimums for identifying a specification and compliance with any one of the items below will be accepted as complying with the identification requirement of 37 C.F.R. Section 1.63:

(A) application number (consisting of the series code and the serial number, e.g., 08/123,456);

(B) serial number and filing date;

(C) attorney docket number which was on the specification as filed;

(D) title which was on the specification as filed and reference to an attached specification which is both attached to the oath or declaration at the time of execution and submitted with the oath or declaration;
or

(E) title which was on the specification as filed and accompanied by a cover letter accurately identifying the application for which it was intended by either the application number (consisting of the series code and the serial number, e.g., 08/123,456), or serial number and filing date. Absent any statement(s) to the contrary, it will be presumed that the application filed in the PTO is the application which the inventor(s) executed by signing the oath or declaration.

M.P.E.P. Section 601.01(a), 7th ed.

- (c) ☒ was described and claimed in PCT International Application No. RU00/00050 filed on Feb. 15, 2000 and as amended under PCT Article 19 on _____ (if any).

SUPPLEMENTAL DECLARATION (37 C.F.R. Section 1.67(b))

(complete the following where a supplemental declaration is being submitted)

☐ I hereby declare that the subject matter of the

☐ attached amendment

☐ amendment filed on _____.

was part of my/our invention and was invented before the filing date of the original application, above identified, for such invention.

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in 37, Code of Federal Regulations, Section 1.56,

(also check the following items, if desired)

☐ and which is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and

☐ in compliance with this duty, there is attached an information disclosure statement, in accordance with 37 C.F.R. Section 1.98.

PRIORITY CLAIM (35 U.S.C. Section 119(a)-(d))

NOTE: "The claim to priority need be in no special form and may be made by the attorney or agent if the foreign application is referred to in the oath or declaration as required by Section 1.63. The claim for priority and the certified copy of the foreign application specified in 35 U.S.C. Section 119(b) must be filed in the case of an interference (Section 1.630), when necessary to overcome the date of a reference relied upon by the examiner, when specifically required by the examiner, and in all other situations, before the patent is granted. If the claim for priority or the certified copy of the foreign application is filed after the date the issue fee is paid, it must be accompanied by a petition requesting entry and by the fee set forth in Section 1.17(i). If the certified copy is not in the English language, a translation need not be filed except in the case of interference; or when necessary to overcome the date of a reference relied upon by the examiner; or when specifically required by the examiner, in which event an English language translation must be filed together with a statement that the translation of the certified copy is accurate." 37 C.F.R. Section 1.55(a).

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

(complete (d) or (e))

- (d) ☐ no such applications have been filed. .
(e) ☒ such applications have been filed as follows.

NOTE: Where item (c) is entered above and the International Application which designated the U.S. itself claimed priority check item (e), enter the details below and make the priority claim.

**PRIOR FOREIGN/PCT APPLICATION(S) FILED WITHIN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS APPLICATION
AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. SECTION 119(a)-(d)**

COUNTRY (OR INDICATE IF PCT)	APPLICATION NUMBER	DATE OF FILING DAY, MONTH, YEAR	PRIORITY CLAIMED UNDER 35 USC 119
RU	99123750	10.11.1999	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO

CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)
(35 U.S.C. Section 119(e))

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below:

PROVISIONAL APPLICATION NUMBER

FILING DATE

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S)
UNDER 35 U.S.C. SECTION 120

- [] The claim for the benefit of any such applications are set forth in the attached ADDED PAGES TO COMBINED DECLARATION AND POWER OF ATTORNEY FOR DIVISIONAL, CONTINUATION OR CONTINUATION-IN-PART (C-I-P) APPLICATION.

ALL FOREIGN APPLICATION(S), IF ANY, FILED MORE THAN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

NOTE: *If the application filed more than 12 months from the filing date of this application is a PCT filing forming the basis for this application entering the United States as (1) the national stage, or (2) a continuation, divisional, or continuation-in-part, then also complete ADDED PAGES TO COMBINED DECLARATION AND POWER OF ATTORNEY FOR DIVISIONAL, CONTINUATION OR C-I-P APPLICATION for benefit of the prior U.S. or PCT application(s) under 35 U.S.C. Section 120.*

POWER OF ATTORNEY

I hereby appoint the following practitioner(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

(list name and registration number)

JOSEPH H. HANDELMAN, 26179

JOHN RICHARDS, 31053

RICHARD J. STREIT, 25765

PETER D. GALLOWAY, 27885

IAN C. BAILLIE, 24090

THOMAS F. PETERSON, 24790

RICHARD P. BERG, 28145

JULIAN H. COHEN, 20302

WILLIAM R. EVANS, 25858

JANET I. CORD, 33778

CLIFFORD J. MASS, 30086

CYNTHIA R. MILLER, 34678

(Check the following item, if applicable)

06669960

[] I hereby appoint the practitioner(s) associated with the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

[] Attached, as part of this declaration and power of attorney, is the authorization of the above-named practitioner(s) to accept and follow instructions from my representative(s).

NOTE: "Special care should be taken in continuation or divisional applications to ensure that any change of correspondence address in a prior application is reflected in the continuation or divisional application. For example, where a copy of the oath or declaration from the prior application is submitted for a continuation or divisional application filed under 37 CFR 1.53(b) and the copy of the oath or declaration from the prior application designates an old correspondence address, the Office may not recognize, in the continuation or divisional application, the change of correspondence address made during the prosecution of the prior application. Applicant is required to identify the change of correspondence address in the continuation or divisional application to ensure that communications from the Office are mailed to the current correspondence address. 37 CFR 1.63(d)(4)." Section 601.03, M.P.E.P., 7th Ed.

SEND CORRESPONDENCE TO

DIRECT TELEPHONE CALLS TO:

(Name and telephone number)

Ladas & Parry
26 West 61st Street
New York, N.Y. 10023

(complete the following if applicable)

Since this filing is a [] continuation [] divisional there is attached hereto a Change of Correspondence Address so that there will be no question as to where the PTO should direct all correspondence.

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

NOTE: Carefully indicate the family (or last) name, as it should appear on the filing receipt and all other document.

NOTE: Each inventor must be identified by full name, including the family name, and at least one given name without abbreviation together with any other given name or initial, and by his/her residence, post office address and country of citizenship. 37 C.F.R. Section 1.63(a)(3).

NOTE: Inventors may execute separate declarations/oaths provided each declaration/oath sets forth all the inventors. Section 1.63(a)(3) requires that a declaration/oath, inter alia, identify each inventor and prohibits the execution of separate declarations/oaths which each sets forth only the name of the executing inventor. 62 Fed. Reg. 53,131, 53,142, October 10, 1997,

Full name of sole or first inventor

Sergei Vasilievich Zakurdaev
(Given Name) (Middle Initial or Name) Family (Or Last Name)

Inventor's signature [Signature]

Date July 04, 2001 Country of Citizenship Russian Federation

Residence Russian Federation, Moscow Rux

Post Office Address Russian Federation, Moscow, ulitsa
Akademika Vargi, 2, kv. 105

Full name of second joint inventor, if any

(Given Name) (Middle Initial or Name) Family (Or Last Name)

Inventor's signature _____

Date _____ Country of Citizenship _____

Residence _____

Post Office Address _____

Full name of third joint inventor, if any

(Given Name) (Middle Initial or Name) Family (Or Last Name)

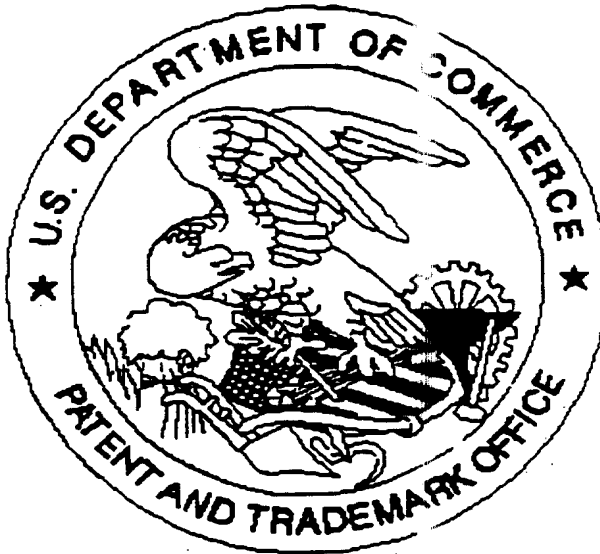
Inventor's signature _____

Date _____ Country of Citizenship _____

Residence _____

Post Office Address _____

United States Patent & Trademark Office
Office of Initial Patent Examination -- Scanning Division



Application deficiencies found during scanning:

☒ Page(s) 3 of 4 of Small Entity _____ were not present
for scanning. (Document title)

☒ Page(s) 8 of 8 of Declarative _____ were not present
for scanning. (Document title)

☐ *Scanned copy is best available.*